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Explosion, which seemed, as above, like a stormy Sea moving from the S.S.E. Note, The Barometer was low for some Days before and after it.

I am, &c.

Arthur Dobbs.

III. *An Account of the Aurora Borealis that appear'd Oct. 8. 1726. In a Letter to the Publisher from the Reverend Dr. Langwith, Rector of Petworth in Suffex.*

THE Northern Lights have been so common in all Places of late Years, that tho' I have often seen them here, I did not think it worth while to write to you about them ; but those that appear'd on *Saturday* the 8th of the last Month, were too remarkable to be pass'd over in Silence. They began about Sun-set ; but I heard nothing of them till between 7 and 8. When I went out, I observ'd a Stream of Light almost due West, which was about seven or eight Degrees broad, and extended it self upwards about 35 or 40 Degrees. I had not a free Prospect of the Western Horizon, and so cannot tell what its Appearance was below. It was not perpendicular to the Horizon, but inclined a few Degrees towards the South. This Stream was of a dusky Red towards the North, but pale on the other side, and seemed to have a faint Mixture of the Prismatick Colours in it.

At the same time there appear'd a pale luminous Arch, whose Middle was nearly N. W. by N. The Altitude of its inner Edge was about 18 or 20 Degrees. This Edge was very distinct and regular all above, but a little confus'd towards the Horizon, where it extended it self beyond the North-Point: How it terminated to the West, I cannot inform you. From the upper Side of this Arch, which was waving, and ill defin'd, there shot up continually such Streams of Light as have often been seen and describ'd, since the Great Meteor of *March* the 6th, 171 $\frac{1}{2}$. The Sky under this Arch look'd exceeding dark, but was in reality clear; for we cou'd see the smallest Stars in it.

Nearly N. E. there was another Stream of pale-colour'd Light, which was about 7 or 8 Degrees distant from the Horizon, and was about as many in Breadth: Its Height was various, and ill defin'd. Towards the bottom of it, was an irregular black Cloud, which in some parts was near a Degree in breadth, in others hardly half so much: This Cloud was almost parallel to the Horizon. The Stream mov'd with a slow regular Motion towards the East.

In the S. E. was another Arch, like that in the N. W. by N. but not quite so high, or of so great an Extent. Between this Arch and the North-Easterly Stream the Sky was of an odd pale colour'd Light, with a mixture of Red in it.

From the South towards the West were gloomy irregular Clouds, which now and then sent out Flashes of Light.

About 8, the North-Easterly Stream suddenly expanded it self every way: All its Parts began to be in a violent Commotion, and its Brightness increas'd to such a degree, that I remember nothing like it in the former great Meteor of this Kind. All above it was of a

bright flame-colour ; but below, it was edg'd with the Prismatick Colours, which were full as strong as I have ever seen them in the brightest Rainbow : They were not indeed so distinct ; for, tho' I observ'd them as exactly as the strange variety of their Motion would permit, I cou'd only distinguish the Red, the Yellow, and a dusky bluish-Green.

This surprizing Sight did not last above a minute or two ; but when the Colours vanish'd here, they began to appear in the North-Westerly Arch, which was now become a portion of a larger Circle than before, and was not elevated so high above the Horizon. The Colours extended themselves from the North towards the West for about 15 or 20 Degrees ; and tho' they were not so bright as in the other Place, yet they were more steady, and so as easily observ'd. Their Order was the same as before, the Red lowermost, and so on : Their Duration much longer.

In the mean time the Streaming Lights began to appear in all parts of the Heavens, and to form a *Corona* and Canopy, which were in all respects like those of the great Meteor of 171 $\frac{1}{2}$. Instead therefore of troubling you with a long detail of the Particulars of these, I shall refer you to the curious descriptions of the other by the Astronomer-Royal, and my late worthy Friend Mr. Cotes. I shall only take notice that the Colours of the *Corona* were neither so strong nor so lasting as those before describ'd, and that the Top of the Canopy was sometimes over-spread with a deep tullen Red.

The Streams continu'd their direction upward towards a point of concourse for a long time after, and form'd by fits imperfect Circles of pale Light about it : This Point, however, was not fix'd ; for at first it seem'd to be in, or very near, our Zenith ; but when I

observ'd it some time after, it lay between the Stars in *Andromeda's* Right-hand, and those at the end of her Chain. The same Observation was made by a Curious Gentleman of this place, who also inform'd me that there was another luminous Arch which pass'd quite thro' the Pole Star: It's continuance was short, and I had not the good fortune to see it my self.

These Appearances held on in some degree till about 11, when the Air began to grow misty, and so put an end to any farther Observations.

I cannot send you the exact Point of the Wind: It was so calm below, that I cou'd not be certain which way it flood; but some that were making their Observations from a high open Place, assur'd me, that it was North-westerly, as it was in the Afternoon before, and the Morning after.

The Mercury was up at 30: The Weather mild and temperate.

I am afraid this Letter is already tedious, and yet I shall venture to lengthen it with the following Observations.

1. That It plainly appears from the Position of the Arches, that they cou'd not owe their Figures to the Sun: They seem to have been partly Optical, and partly to have depended upon the different Heights of the luminous Vapours; but for want of sufficient *Data*, it will be no easy matter to determine how far each of these Causes concurr'd.

2. The Prismatick Colours, wherever they appear'd, seem to have been caus'd by the Sun.

3. None of the Streams, as far as I could observe, proceeded directly from the Horizon. They were nearest it towards the North, where there were some weak irregular Lights in the confus'd parts of the Arch before describ'd.

4. I find by some of my Papers that during the Meteor of 171 $\frac{1}{2}$. the Mercury stood at 30.2; so that the two Meteors agree, as in many other particulars, so in the following, *viz.* That the Air was calm, The Wind North-westerly and the Mercury high.

I shall only add, that luminous Vapours in the Air are much more common than they are generally taken to be; for the Nights are very often lighter when the Sky is over-cast, than in the brightest Star-light, tho' the *Crepusculum* be quite gone off and there be no Moon.

I am, &c.

Petworth, Nov. 16. 1726.

B. Langwith.

